

ABSTRACT OF THE DISCLOSURE

The present invention features an RF-actuated microelectromechanical systems (MEMS) switch for use with switchable RF structures such as antennas. An antenna within each MEMS switch module is coupled to a tuned circuit and a detector. The DC voltage output of the detector is used as the control input to the MEMS switch. This allows arrays of MEMS switch modules to be actuated by remotely generated radio frequency signals thus alleviating the need for running metallic conductors or optical fibers to each MEMS switch. The MEMS switch is particularly suited for use in conjunction with both passive and active antenna elements to allow reconfiguration of antenna or other RF structures. Frequency response characteristics, phasing, and directionality characteristics may be altered easily.